

We claim:

1. A memory control system, comprising:
 - a processor;
 - a bus in communication with the processor;
 - a first memory in communication with the processor
 - 5 in a first data path removed from the bus; and
 - a second memory in communication with the processor
 - in a second data path removed from the bus and having an
 - empty memory indicator;
 - wherein, in response to the second memory containing
 - 10 no application data, the second memory provides a corresponding indication to the processor.
2. The system of claim 1, further comprising:
 - a hub in communication with the bus to provide application data to the processor.
3. A memory control system, comprising:
 - a controller module having a first data path, a second data path, and a bus; and
 - a first memory in communication with the first data
 - 5 path; and
 - a second memory in communication with the second data path and having an empty memory indicator;
 - wherein the controller module replicates data from the first memory to the second memory in response an
 - 10 empty data indication from the second memory.
4. The system of claim 3, further comprising:
 - an application module in communication with the controller module, wherein the controller module is con-

5 nected to retrieve application data from the application
module for storage in the first memory.

5. The system of claim 3, further comprising:

 a memory module in communication with the controller
module and containing the first memory and the second
memory.

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6. The system of claim 3, further comprising:

 an application electrical connector on the applica-
tion module; and

5 a controller electrical connector on the electrical
applications controller in communication with the appli-
cation electrical connector;

 wherein each of said electrical connectors are axi-
ally symmetric to enable different relative rotational
positions between the application and connector modules.

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7. The system of claim 4, further comprising:

5 means for releasably connecting the application mod-
ule to the electrical applications controller, said means
enabling the application module and the electrical appli-
cations controller to be disengaged and break electrical
communication between them, rotated 180 degrees and reen-
gaged to reestablish electrical communication between
them.

8. A method of installing a new memory that has a pre-
termined memory capacity into a system that comprises a
processor and first old memory, with the first old memory

storing an amount of application data to produce a redundant array of independent memories, comprising:

5 initiating a duplication function in the processor;
 transmitting an empty data indication from the new memory to the processor; and
 replicating the application data from the first old
10 memory to the new memory.

9. The method of claim 8, wherein replicating the application data comprises comparing the amount of application data in the first old memory to the capacity of the new memory to determine whether said capacity is sufficient to hold the application data.

10. The method of claim 8, wherein replicating the application data comprises comparing the amount of application data in the first old memory to the capacity of the new memory to determine whether said capacity is sufficient to hold the application data.

11. A method of installing a new memory that has a predetermined capacity and a new memory ID into a system that comprises a processor and first and second old memory having respective first and second memory IDs, first and second old memories, said memories capable of storing application data, comprising:

5 removing the first of old memory from the system;
 installing the new memory into the system;
 determining whether the new memory ID matches either
10 of the first or second memory IDs; and

replicating the application data from the second old memory to the new memory if the new memory ID does not match either of the first or second memory IDs, to maintain a redundant array of independent memories.

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12. The method of claim 11, wherein said new memory transmits an empty data indication to said processor if said new memory does not store any data, and said transmission enables said data replication.